

Appl. No. 10/672,105
Amdt. dated January 3, 2007
Reply to Office Action mailed July 5, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) In a door for closing/opening an opening of large structure such as large depot and an airshed, etc., a half spread folding door comprising:

plural door leaves having a predetermined width and length;

door frames supporting each door leaf in both side ends thereof;

a hinge means for connecting successively each door leaf with adjacent door leaf leaves along its width direction, a pair of hinge means, each mounted lengthwise in both side ends of the door leaf;

plural hinge means mounted lengthwise in the middle of the door leaf, allowing each door leaf to be rotated around a hinge shaft correlatively, and for folding each door leaf toward alternative dead end of the door leaves sequentially; and

a spread confining means for limiting relative rotation angles of every door leaf interconnected by the hinge means and a spread range of each door leaf in an angle of a predetermined angle 30° to 60° to ~~configure as the form a~~ of zigzag when the door leaves are spread.

2. (Original) The half spread folding door as set forth in claim 1, wherein the spread confining means is comprised of:

a first hinge cylinder established at one side end of the door leaf and enabling the hinge shaft go through, and having a first notch at a lower portion of the first hinge cylinder, the first notch having a form of a cut-off in a predetermined angle around an axis of the first hinge cylinder;

a second hinge cylinder established at an adjacent side end of the adjacent door leaf to the door leaf and enabling the hinge shaft go through, and having a second notch at an upper

Appl. No. 10/672,105
Amdt. dated January 3, 2007
Reply to Office Action mailed July 5, 2006

portion of the second hinge cylinder, the second notch having a form of a cut-off in a predetermined angle around an axis of the second hinge cylinder, the angle being the same as one of the first notch, but overlapping in only certain value; and

a stopper attached on a circumference of the hinge shaft to nest in the overlap portion, restricting the rotation of each door leaf coupled with the hinge shaft.

3. (Original) The half spread folding door as set forth in claim 1, wherein the spread confining means is comprised of a stopper that is installed projectedly at respective hinge end of a pair of door leaves coupled by the hinge means or at a hinge end of only one door leaf.

4. (Original) The half spread folding door as set forth in claim 1, wherein the spread confining means is comprised of a flexible wire or rope having a predetermined length which connects with each end of the door leaves coupled with the hinge shaft, all connected ends facing toward at least one side of the folding door.

5. (Original) The half spread folding door as set forth in claim 1, wherein the spread confining means is comprised of a sheet which connects with each end of the door leaves coupled with the hinge shaft, all connected ends facing toward at least one side of the folding door.

6. (Original) The half spread folding door as set forth in claim 5, wherein the sheet is configured as the form of a single body that connects all ends of successive coupled door leaves.

7. (Original) The half spread folding door as set forth in claim 6, wherein the sheet is made by high tensile synthetic waterproof material.

Appl. No. 10/672,105

Amdt. dated January 3, 2007

Reply to Office Action mailed July 5, 2006

8. (Original) The half spread folding door as set forth in claim 1, wherein the spread confining means is comprised of a sheet which connects with each end of the door leaves coupled with the hinge shaft, all connected ends facing toward the outside of the folding door; and a flexible wire or rope having a predetermined length which connects with each end of the door leaves coupled with the hinge shaft, all connected ends facing toward the inside of the folding door.

9. (Original) The half spread folding door as set forth in claim 8, wherein the sheet is configured as the form of a single body that connects all ends of successive coupled door leaves and is made by high tensile synthetic waterproof material.